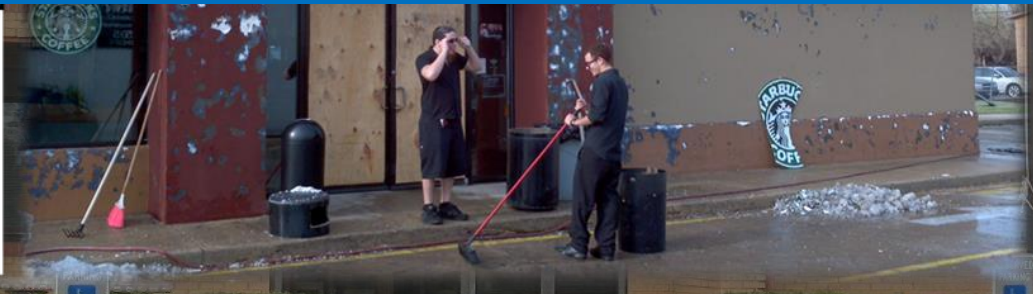


# RGV/Ranchland Severe Weather Potential April 17-18, 2015

National Weather Service Brownsville/Rio Grande Valley  
April 17, 2015, 11 AM



Friday, April 17, 2015



# The “Skinny”

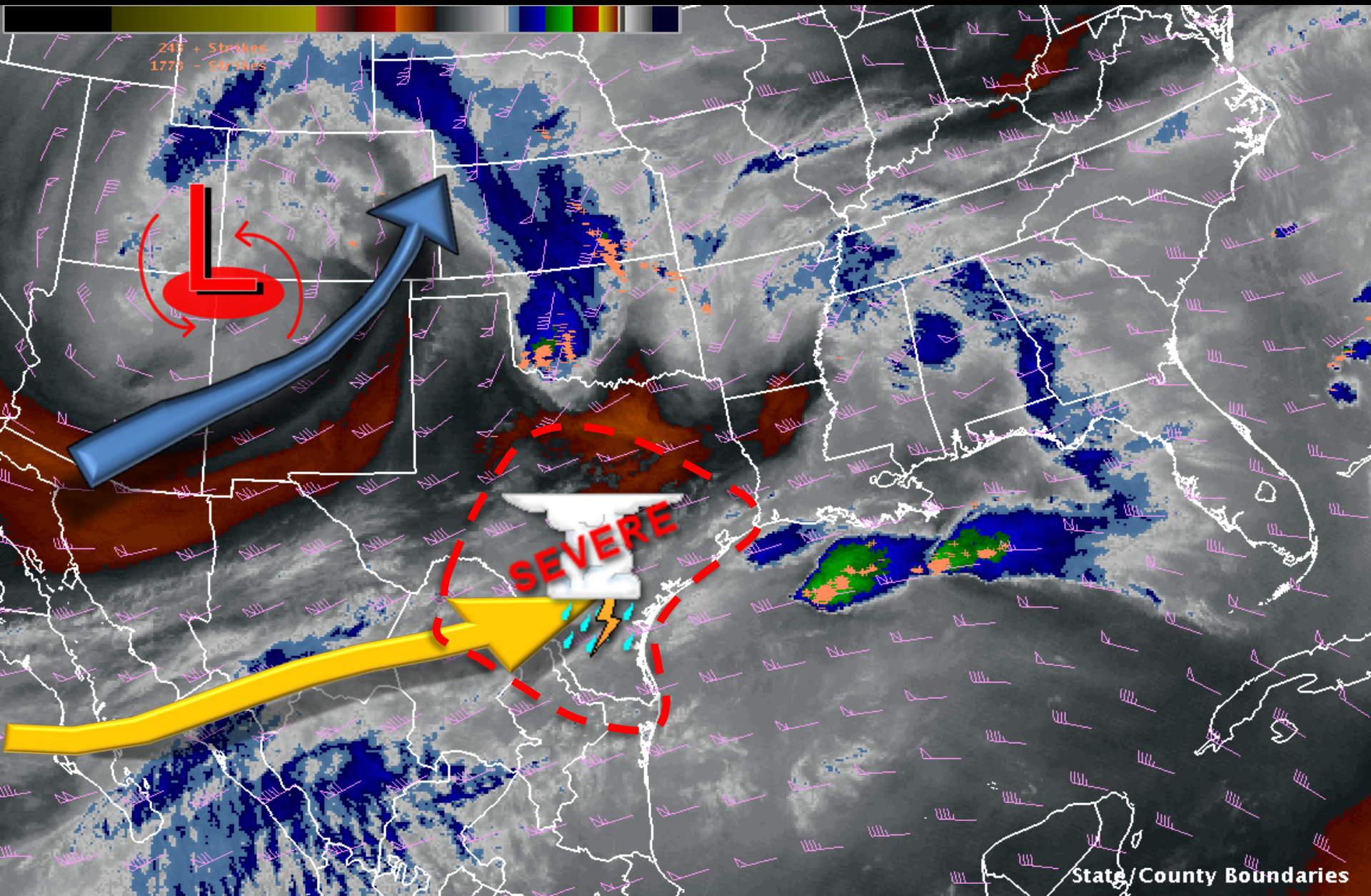
Atmospheric Energy Continues to Rotate Around Upper Level Disturbance Moving Slowly East from the Southern Rockies. Each disturbance acts on daytime heating of an unstable atmosphere from the Sierra Madre west of Del Rio to the Hill Country today and Friday, resulting in dangerous thunderstorm cells (afternoon) and storm systems, or “lines” (evening/overnight).





# The Skinny, in a Picture

## Friday/Saturday





# Threats to Watch

## Friday/Friday Night

- Hail
  - Location for Worst: Zapata-Hebbronville-Falfurrias
  - Timing: Late Afternoon/Early Evening
  - Size: Up to Golfball; Short Duration
- Wind
  - Also Possible in Ranchlands, 60-70 mph reasonable worst-case
  - Organized Line Expected after Sunset
  - Should Reach RGV but in a Weakened State (similar to Sunday, if not less). **Hail and Wind Equal Threat**
- Flooding
  - Stronger cells can produce up to 2 inches (mainly ranchland)
  - Lesser rain as line reaches Valley, but cannot rule out 1-2 inches in spots where rain lasts longest anywhere
  - Nuisance (2 feet of water) flooding possible; isolated 3 feet if over poor drainage locations
- Lightning
  - Frequent to Excessive in ranchland cells, Occasional to Frequent elsewhere



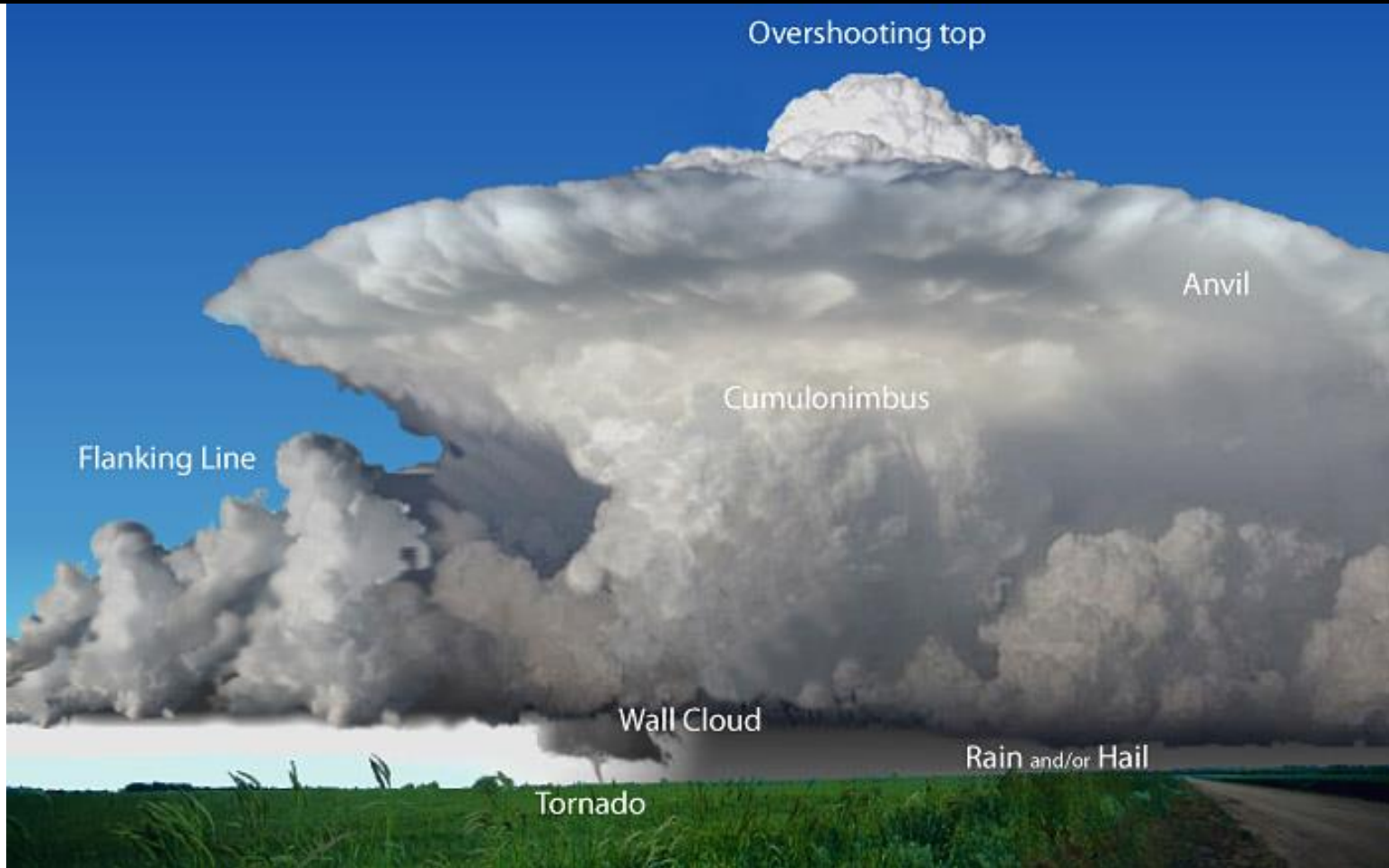
# Threats to Watch

## Saturday/Saturday Night

- Hail
  - Location for Worst: Zapata-Hebbronville-Falfurrias initially, could move into populated mid Valley (McAllen/Metro)
  - Timing: Mid Afternoon to Early Evening
  - Size: Golfball to Baseball (worse case); short duration
  - **Hail the Primary Threat**
- Wind
  - 60-70 mph reasonable worst-case in any "Supercell"
  - Timing: Mid Afternoon to Early Evening
  - Best Opportunity from Ranchlands to the Mid Valley
- Flooding
  - Drier Atmosphere = Lower Rain Totals...
  - ...Still, Stronger cells can produce 1-2 inches
  - Nuisance (2 feet or less) flooding most likely
- Lightning Ground Strikes
  - Frequent to Excessive in strongest cells



# Education 101: Supercells

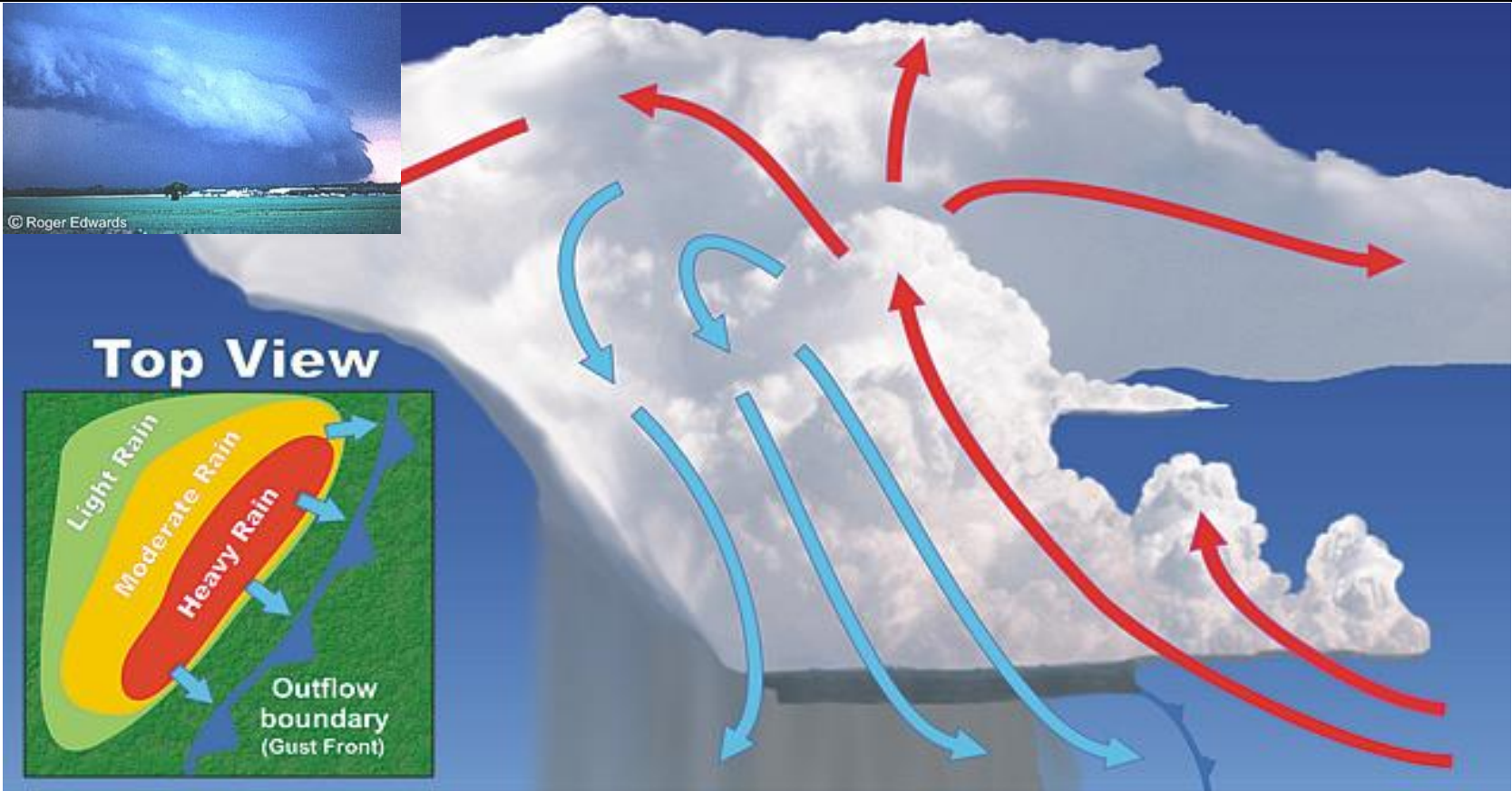


- Hail Golfball Size or Larger
- Wind 70 mph or Higher
- Downpours Leading to Local Flooding
- Tornadoes in Some Cases





# Education 101: Squall Lines

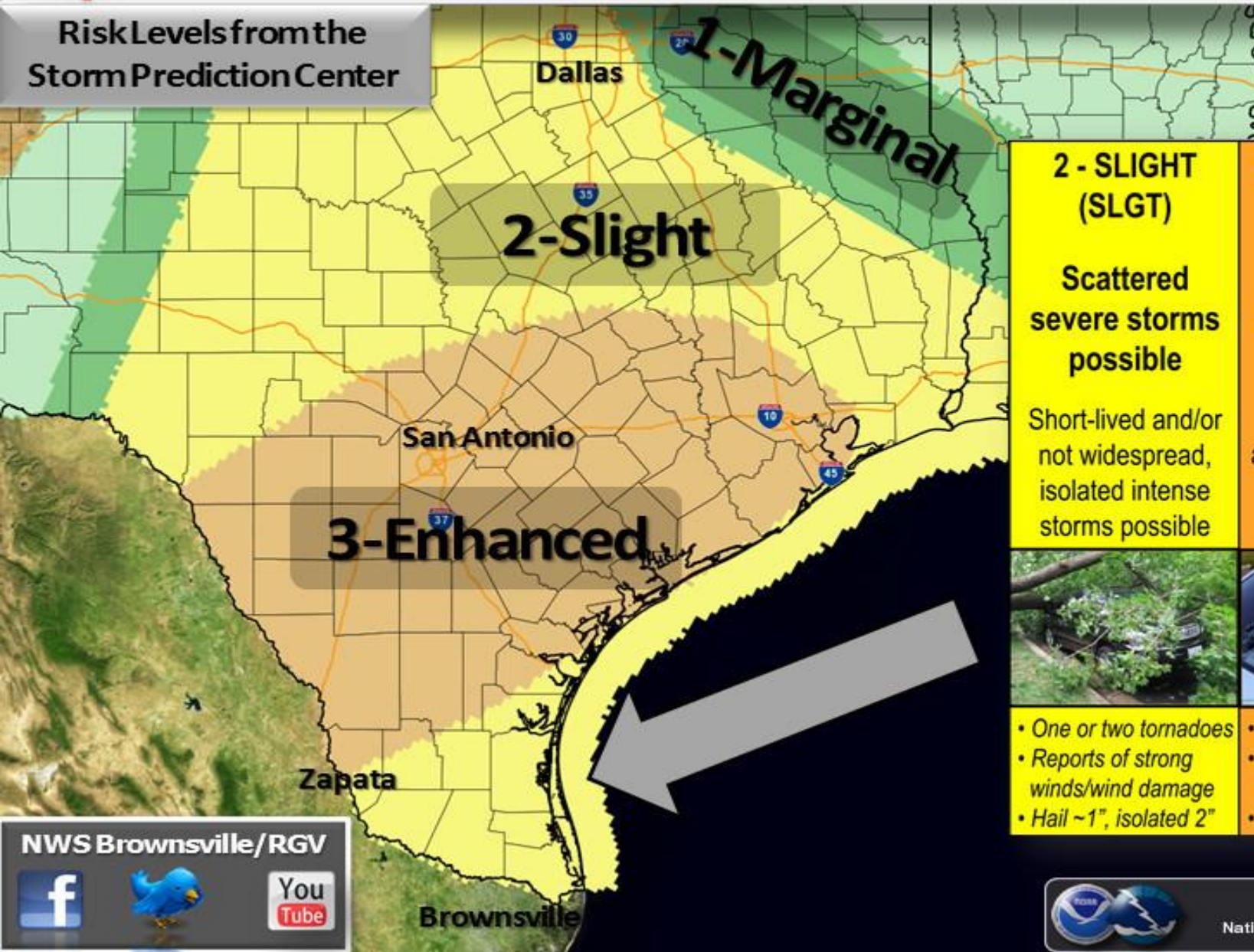


- Wind 40 to 70 mph (depending on strength of line at time)
- Flooding Rain (if slowing down or falling on saturated ground)
- Tornadoes in some of the "gaps"
- Smaller Hail (Pea to Dime Size)



# Severe Weather Potential Today

Risk Levels from the  
Storm Prediction Center



## 2 - SLIGHT (SLGT)

Scattered  
severe storms  
possible

Short-lived and/or  
not widespread,  
isolated intense  
storms possible



- One or two tornadoes
- Reports of strong winds/wind damage
- Hail ~1", isolated 2"

## 3 - ENHANCED (ENH)

Numerous  
severe storms  
possible

More persistent  
and/or widespread,  
a few intense



- A few tornadoes
- Several reports of wind damage
- Damaging hail, 1 - 2"

NWS Brownsville/RGV



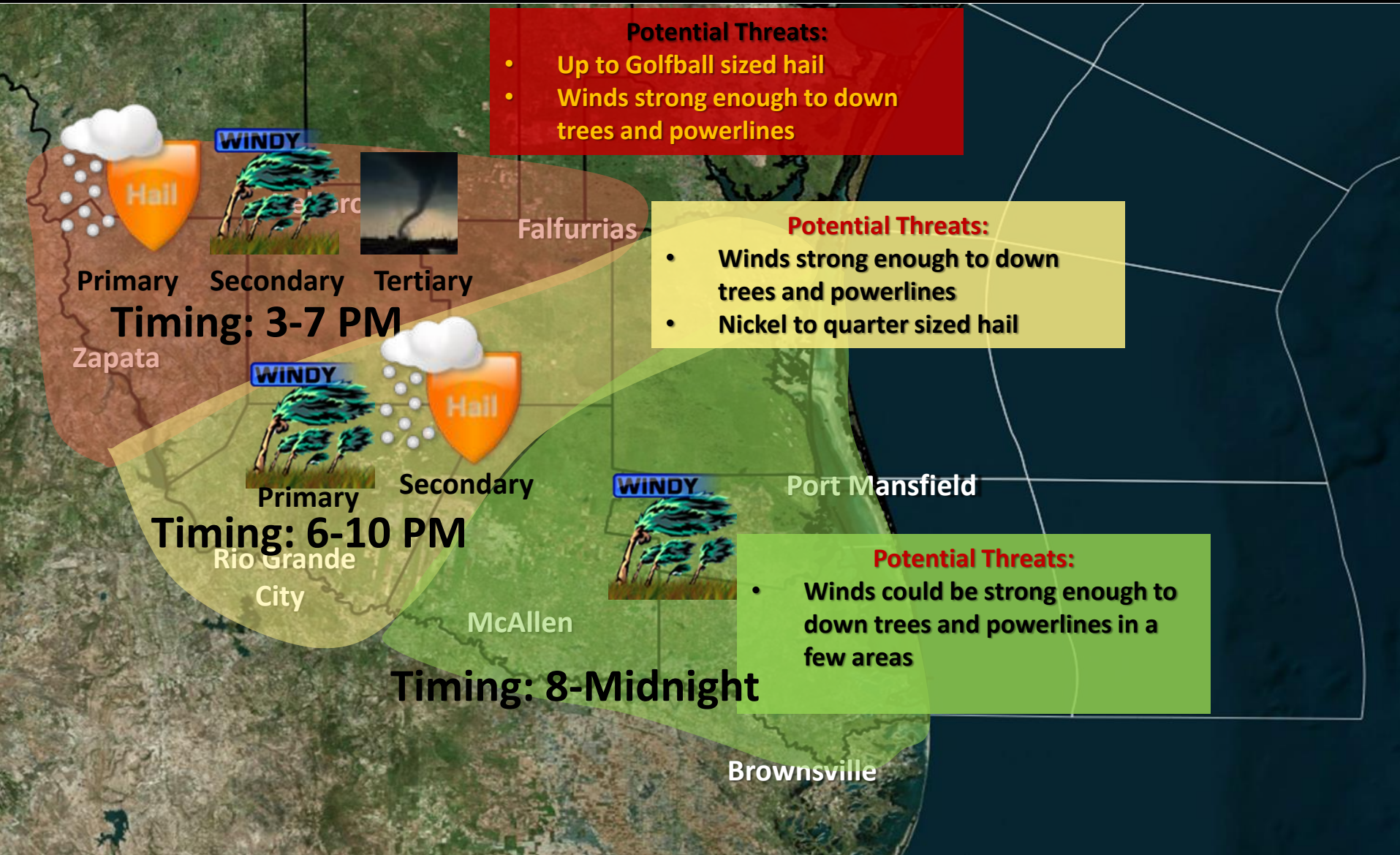
721 AM CDT  
Fri Apr 17 2015

National Weather Service  
Brownsville, TX





# Evolution: Friday/Friday Night

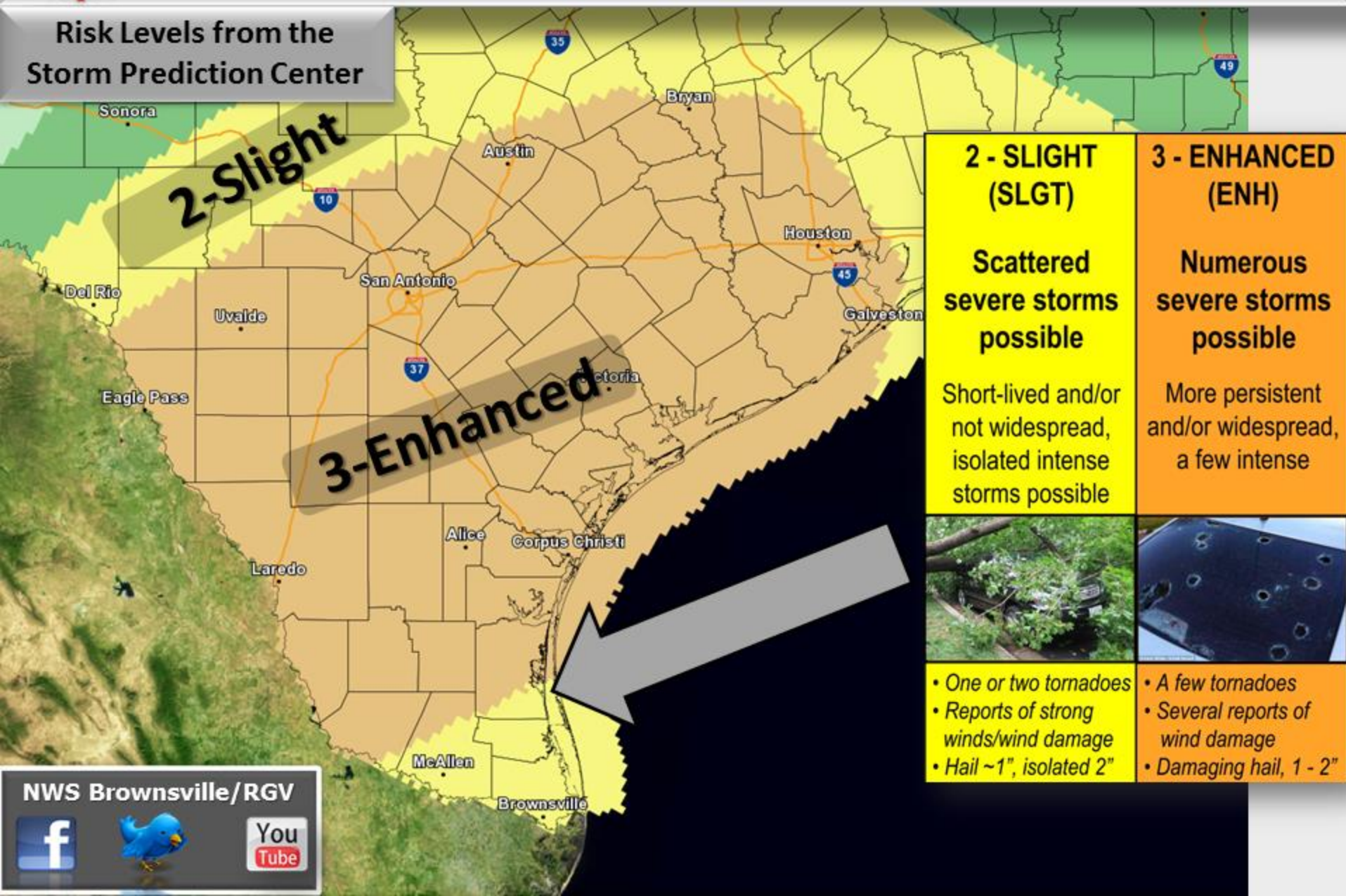






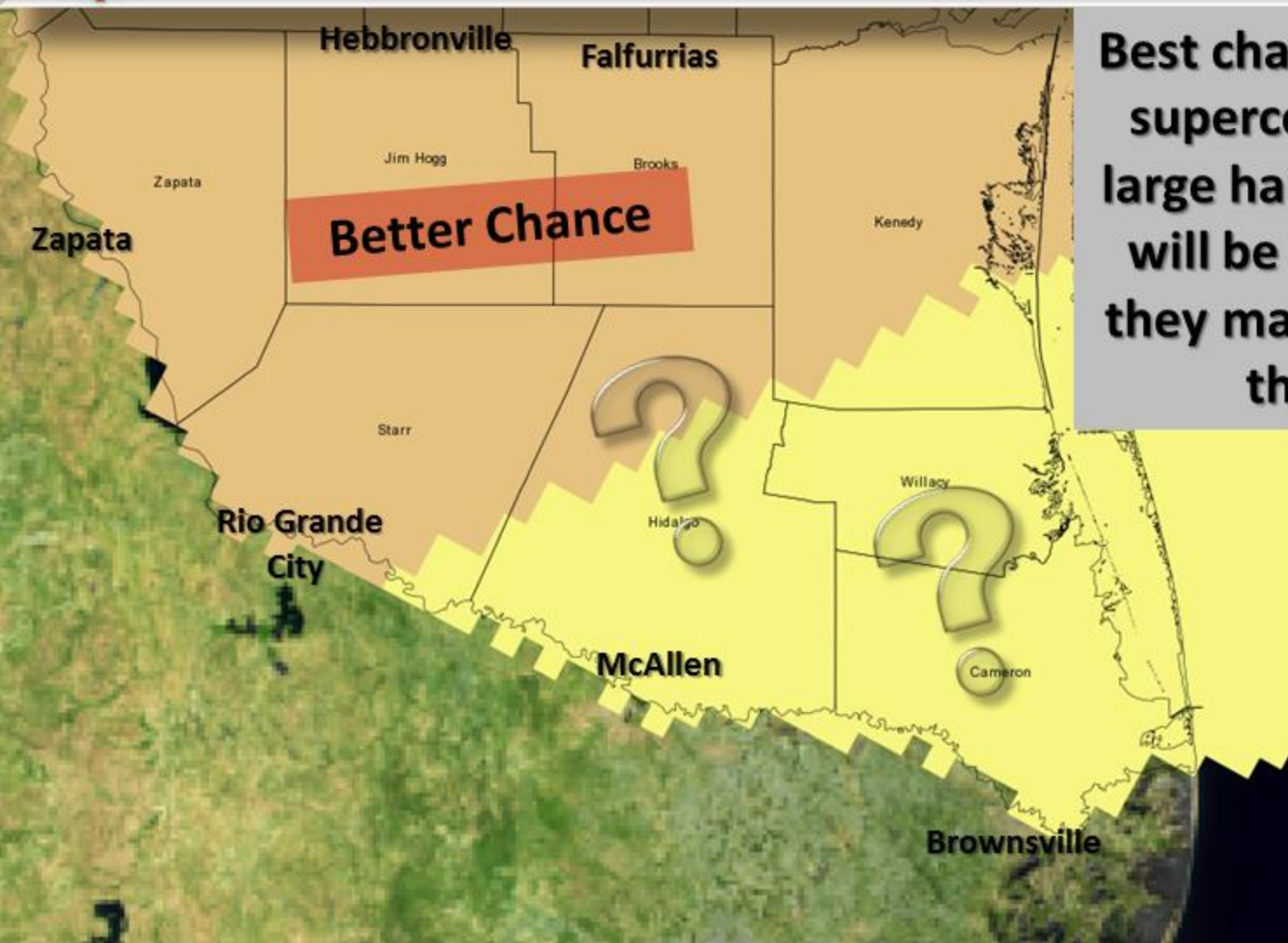
# Severe Weather Potential Saturday

Risk Levels from the  
Storm Prediction Center





# Impacts Saturday?



**Best chance for isolated supercells, producing large hail of 1-2+ inches will be Saturday...will they make it south into the Valley?**

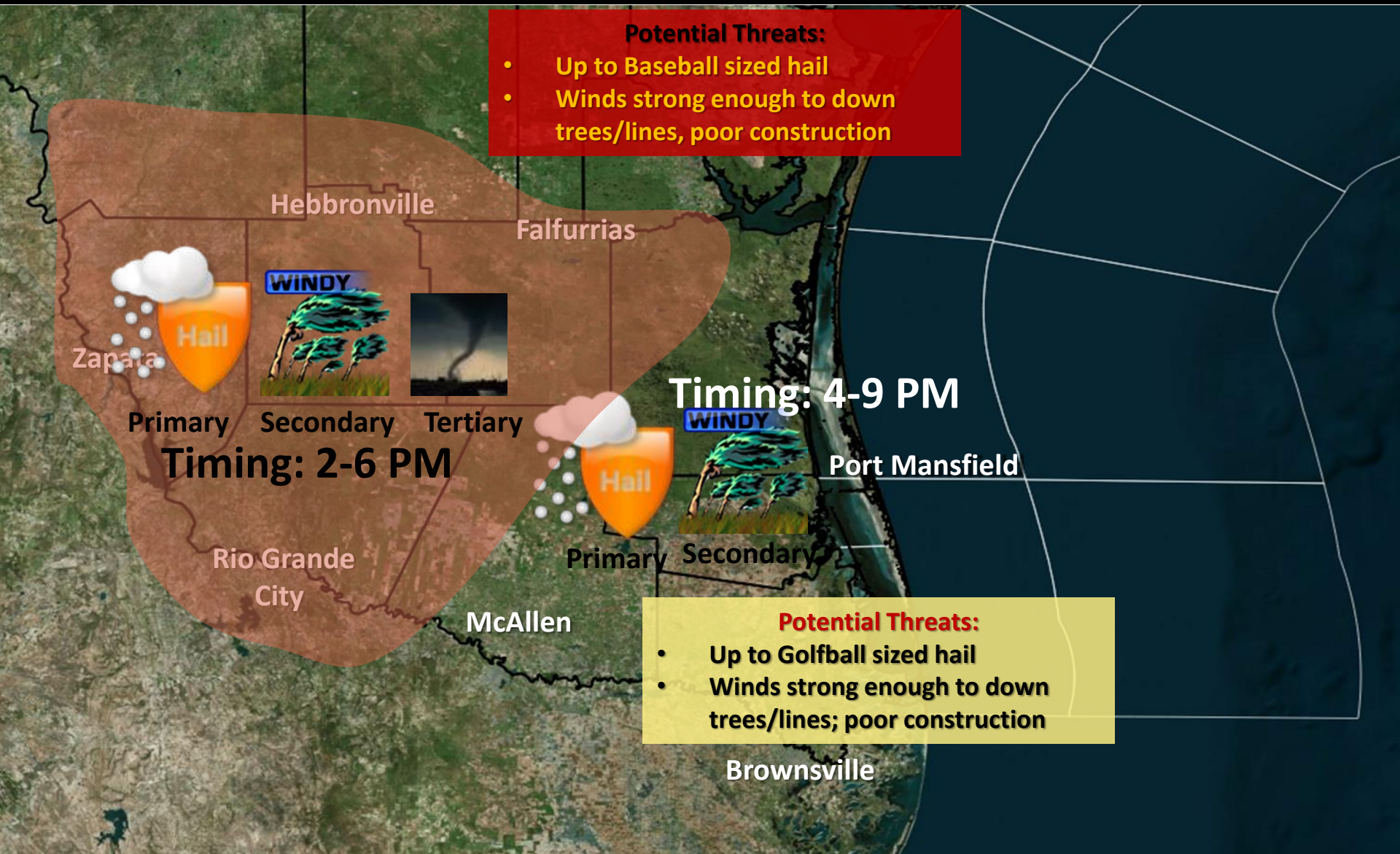
NWS Brownsville/RGV







# Evolution: Saturday/Saturday Evening





# Bottom Line: Impact/Action

- **Hail**

- Individual "supercell" storms have the best chance for producing long duration, large, jagged-edge hailstones. Zapata-Kenedy, but also northern Starr/Hidalgo, need to be concerned
- This type of hail is most damaging.
- Residents/businesses in these areas should have a plan to move vehicles/items under cover well before the hail arrives. Winds will drive the hail from west to east, or north to south, so home items should be moved to the other side (or better, placed in rooms with multiple walls and small or no windows)
- Drivers caught in the hail should pull over, park, get below the dashboard (with seatbelt on) and cover with blankets/pillows
- Underpasses that flood in heavy rains are not recommended but gas station canopies and self-serve car washes would be a possible refuge of last resort.



# Bottom Line: Impact/Action

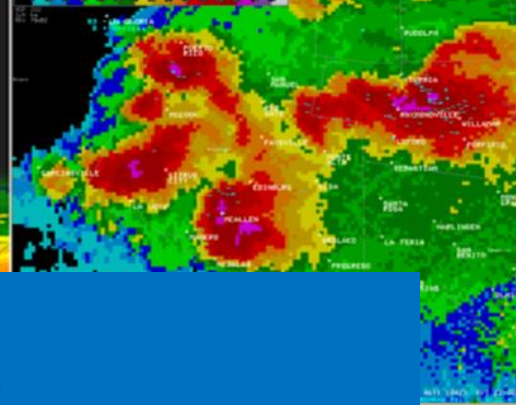
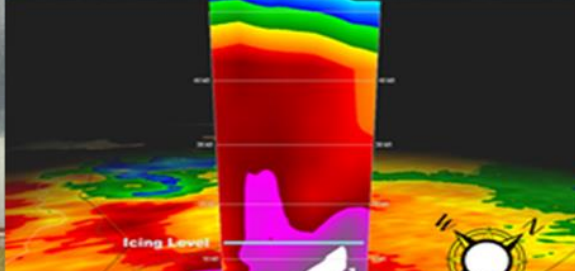
- **Wind**
- We've been through the drill recently (Sunday evening): Stronger storms can knock down numerous large limbs, power lines, and move/lift lightweight objects.
- From what we understand, Sunday's initial downburst did not hit mobile homes, unanchored trailers, or exposed industrial buildings with aluminum, tin, or light steel roofs. The winds, which knocked down numerous tree limbs and some power lines, ***were strong enough to cause many problems*** in these types of neighborhoods or industrial parks. Could be problem this evening in ranchland communities.
- Drivers should have multiple escape routes and be sure to be near a safe zone (well built structure) ***well before*** storms arrive. Define that location *tonight* to make Friday go smoothly, if a safe zone needs to be used.





# Bottom Line: Impact/Action

- **Lightning/Flooding**
- We always advise "When Thunder Roars, go Indoors". Most lightning deaths occur before or after a storm's core! During the peak of the storm, people should be indoors, away from windows, and not near water or live electricity. Consider unplugging unused items this evening.
- Poor drainage locations are always at risk from thunderstorm downpours. 3 or more feet of standing water is possible in worst-case scenarios.
- Drivers should map out a safe route. Most know where the flood prone areas are, so those areas should not be part of driving plans Friday and Friday night
- Ranchers: If fields are risky for cattle to survive another 2-3 inches in a downpour, consider moving them to higher ground tonight.



**Questions? Thank You!**

National Weather Service Brownsville/Rio Grande Valley  
April 17, 2015, 11 AM

